client basis <u>by a multi-client manager unit</u> to [facilitate] <u>provide</u> denial of updating the digital signature key pair on a per client basis.

24.   (Once Amended) The storage medium of claim 21 wherein the stored program further facilitates

determining whether a digital signature key pair update request has been received from a client unit;

receiving a new digital signature key pair from the client unit in response to the digital signature key pair update request; and

creating a new digital signature certificate containing the selected public key expiry data selected for the client [generating] <u>that generated</u> the digital signature key pair update request.

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Response

Applicants' attorney wishes to thank the Examiner for the courtesies extended during the telephone discussion on March 22, 1999. Per the above-mentioned discussions, the Examiner has waived the objections relating to the Declaration concerning signature of one of the inventors and the Post Office address objection. However, the Examiner is maintaining the objection with respect to the language "one of the original and first joint" as being unclear as to whether the inventors are the sole joint inventors. Applicants respectfully submit that the Declaration is clear and meets the statutory requirements indicating that the named inventors are the sole joint inventors. However, Applicants also respectfully submit that if there is a deficiency, such deficiency is a minor deficiency which is self-evidently cured in the rest of the Declaration. (See, e.g., MPEP §602.03) and request that the Examiner with full signatory authority respectfully waive this deficiency. If, however, it is deemed that this defect cannot be waived, Applicants will submit a supplemental declaration upon notice of allowable subject matter.

Applicants respectfully traverse and request reconsideration of the amended claims.

FIG. 1 is objected to because Part 20 is not labeled. The attached drawings indicate suitable correction. In addition, the Specification has been amended to include reference to the reference numerals 30, 34, 40 and 64. Also, FIG. 2 has been amended to provide reference character 25 to designate the user log-in step.

Claims 1-26 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse and believe that the claims as originally submitted are not vague and indefinite since the claims must be read in light of the Specification. However, in view of the discussions with the Examiner, Applicants have attempted to address the Examiner's concerns by amending the claims as indicated. The Applicants also note that, for example, the term "multi-client manager unit" is not believed to be vague and indefinite in view of the Specification since, for example, the Specification states on page 4, line 15, "... a multi-client manager 12 otherwise known as a certification authority ... manages a number of clients 14, 16 and 18 in a cryptographic computer network." Such a multi-client manager unit is simply a certification authority that manages a number of clients. This may be a server, or any other suitable device.

Claim 1 has been amended to indicate that, among other things, the selectable expiry data and the selectable private key expiry data are both stored in some type of digital form. As to claim 4, the Office Action indicates that the claim is confusing because it is unclear why a client would be responding to its own request by sending something. As set forth in the Specification, a client may, if desired, also generate a new digital signature key pair. The multi-client manager may optionally generate the new digital key pair, or some other digital key pair generator may also generate the key pair. If the client generates the new digital signature key pair, the client sends the new digital key pair to the manager unit. (See, for example, page 6, lines 23-27.) A client may request, for example, a new digital key pair whereafter the multi-client manager may indicate that it wants the client to generate the new digital key pair, and thus would

receive a request from a client and the client may then send a response in addition to its request. In addition, other scenarios may also be used. Claim 4 has also been amended with respect to the Examiner's further rejection.

Claims 2-8 have been rejected as depending from Claim 1. In view of the indicated amendments, Applicants believe that these claims are in condition for allowance. In addition, with respect to Claim 8, as known in the art, directory entries may be entries in a directory, such as, for example but not limited to, an X.509 type directory as known in the art, or any other suitable data storage configuration. Such entries may be grouped for clients, certification authorities or other suitable entities within a system. As such, Applicants respectfully request further clarification as to why such a term "client directory entry" "does not make any sense to the Examiner".

As to Claim 9, it has been amended to indicate that the multi-client manager unit provides the selectable expiry data. Applicants note that such a unit may be a suitably programmed server, or may be any other suitable program, hardware, software or combination thereof that provides the selectable expiry data as claimed. The amendments to this claim are believed to overcome the Examiner's rejections.

Claims 10-13 have been rejected as depending from Claim 9 and inheriting indicated deficiencies. Applicants now believe that the claims as amended are definite and clear. For example, Claim 10 has been amended to indicate that the method also associates stored selected expiry data selected for the new digital signature key pair to affect transition from an old digital signature key pair to a new digital signature key pair. As such, in addition to affecting the transition from an old encryption key pair to a new encryption key pair, Claim 10 adds, among other things, association of selected expiry data to affect the transition from an old signature key pair to a new digital signature key pair.

Claims 11-13 have been rejected as depending from Claim 10 by inheriting their deficiencies. Based on the amendments, Applicants respectfully submit that these claims are also in condition for allowance. Claim 12 has been amended similar to Claim 3.

As to Claims 14-17, the Examiner substantially repeats the rejections with respect to Claim 1. As such, Applicants have also suitably amended Claims 14, 15 and 16.

Claim 17 has also been amended to address the rejection of apparent incompleteness. Claim 18 has also been amended similar to Claim 4 and the above remarks with respect to Claim 4 are repeated herein.

Claim 21 has been rejected on similar grounds as Claims 1 and 9. Suitable amendments have been made.

Claims 22-25 have been rejected as inheriting the deficiencies of Claim 21. These claims are also believed to be allowable in view of the indicated amendments.

Claim 23 has been rejected on similar grounds as Claim 3. Applicants have amended the claim and incorporate their remarks with respect to Claim 3 herein.

Claim 24 has been rejected under similar grounds as Claim 4. As such, Applicants incorporate the same remarks with respect to Claim 4.

Claims 1-20 stand rejected under 35 USC §101 because the claimed invention is allegedly directed to non-statutory subject matter. However, the Examiner has read the Specification and determined that the disclosed invention has a proper application in the technological arts. (Office Action, p. 9) In particular, Claims 1-20 have been rejected as merely manipulating abstract ideas without placing any limitation to a practical application. With respect to Claim 1, the Office Action states that the first step transpires through a multi-client manager unit but is unclear "what does the storing and associating

and where stuff is stored". The Office Action indicates that the claims would be allowable if the item doing the storing and associating is mentioned.

Applicants respectfully traverse and request reconsideration due to the amended claims. As specifically recited in the claims, the practical application is providing updated digital signature key pairs in a public key system. In particular, the claims recite the practical application as providing selectable expiry data for public and private keys that are selectable on a per claim basis in a public key system. In addition, further claim language limits the application of the method to a practical application, namely the public key system with public and private key expiry data as claimed. Applicant respectfully requests further reasoning as to why such claim language is not limitation "to a practical application". Applicants also respectfully submit that the claimed method as set forth in Claim 1, for example, is not merely manipulating abstract ideas since aside from being limited to a practical application, the specific data claim is, for example, selectable public key expiry data, selectable private key expiry data, in addition to digitally storing these public key expiry data and private key expiry data for association with a new digital signature key pair. This is patentable subject matter.

Claims 2-8 have been rejected as inheriting the alleged deficiencies from Claim 1. Applicants respectfully submit that the claims as amended are directed to statutory subject matter and are directed to practical application and not merely manipulating abstract ideas as alleged in the Office Action. In addition, the storing and associating and where the stuff is stored may be in any suitable location done by any suitable unit for a public key based cryptography system. Moreover, Applicants claim that a multi-client manager unit provides selectable expiry data, for example, in Claim 1.

Similar rejections are made with respect to Claims 14-20. Applicants respectfully incorporate by reference the comments stated above with respect to Claims 1-13.
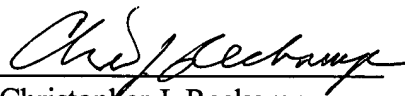
In addition, Claims 3, 12 and 16 have been rejected as failing to state what provides the variable update privilege control. As to method claims, Applicants respectfully

submit that an applicant is not required to limit claims to specific apparatus when the invention may cover, and does cover, many. However, in these particular claims, the claims have been amended to include that the variable update privilege control is provided to the multi-client manager unit. Similarly, Claims 4 and 18, 5 and 19, 6 and 20 have been rejected for failing to state what apparatus is required to perform the indicated functions. These claims are not limited to the preferred embodiment and as such Applicants have not included the particular mechanism since they may vary from system to system.

Lastly, the Examiner has indicated that a formal rejection based on the prior art has not been attempted but has cited several references. Applicants note receipt of the indicated references and will provide any necessary response upon receipt of a rejection based on these references or other suitable references.

For the reasons stated above, the applicants believes that claims are in condition for allowance and respectfully request that they be allowed. The Examiner is invited to contact the undersigned attorney by telephone or facsimile if the Examiner believes that such a communication would advance the prosecution of the present patent application.

Respectfully Submitted,

By: _____

Christopher J. Reckamp
Registration No. 34,414
Attorney for Applicants

Markison & Reckamp, P.C.
175 W. Jackson Boulevard
Suite 1015
Chicago, Illinois 60604
Telephone: (312) 939-9800
Facsimile: (312) 939-9828